



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,257	12/09/2003	Takeshi Hirose	SE-US035180	3330
22919	7590	08/09/2007		
GLOBAL IP COUNSELORS, LLP 1233 20TH STREET, NW, SUITE 700 WASHINGTON, DC 20036-2680			EXAMINER DIXON, ANNETTE FREDRICKA	
			ART UNIT 3771	PAPER NUMBER
			MAIL DATE 08/09/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

ED

Office Action Summary	Application No.	Applicant(s)	
	10/730,257	HIROSE, TAKESHI	
	Examiner	Art Unit	
	Annette F. Dixon	3771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 30-58 is/are rejected.
- 7) ☒ Claim(s) 33, 34, 43 and 52 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the amendment filed on June 7, 2007.

Examiner acknowledges claims 1-67 are pending in this application with claims 1-29 and 59-67 having been withdrawn from consideration, claims 33, 34, and 52 having been amended.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 30-58 are rejected under 35 U.S.C. 102(b) as being anticipated by Furtura (JP 11-020787 A).

As to Claims 30, 40, and 49 Furtura discloses an information processing device for a diver adapted to be used for diving with at least a first and second cylinders respectively containing a first and second mixed gases in which a plurality of diving gases are mixed with different mixture ratios for each of said first and second cylinders (Figure 3, elements 94) comprising: an oxygen partial pressure calculating and monitoring unit (60).

As to Claim 31, Furtura discloses at least one of said first and second cylinders contains oxygen as one of the diving gases. (Figure 3, elements 94)

As to Claims 32, 41, and 50, Furtura disclose the oxygen partial pressure calculating and monitoring unit includes: an oxygen partial pressure violation determining unit (98) configured to calculate an oxygen partial pressure and determine

Art Unit: 3771

whether there is the possibility of oxygen poisoning or oxygen deficiency, and a notification unit (the combination of elements 10, 37, and 38) configured to notify the driver when there is the possibility of oxygen poisoning or oxygen deficiency.

As to Claims 33, 42, and 51, Furtura discloses the oxygen partial pressure calculating unit (60) is configured to execute a process that permits from said first cylinder to said second cylinder, when the driver selects to use said second cylinder while using said first tank, and upon a determination of no possibility of oxygen deficiency of oxygen poisoning based on an oxygen partial pressure value if said second cylinder is used (95).

As to Claims 34, 43, and 52, Furtura discloses said notification unit (the combination of elements 10, 37, and 38) is configured to notify the diver whether switching to said second cylinder is permitted by using at least one of display, alarm sound, or EL backlight. Specifically, Furtura discloses element 37 is an alarm sounding unit and element 10 is a display panel.

As to Claims 35, 44, and 53, Furtura discloses a time keeping section (68) section configured to measure an elapsed dive time; a water depth gauging section (61) configured to detect a water depth value at a diving location of the diver in accordance with a preset elapsed dive time; and a diving information storage unit (the combination of elements 54 and 53) configured to store said elapsed dive time and said detected water depth value.

As to Claims 36, 45, and 54, Furtura discloses an information device for a diver adapted to be used for diving with at least a first and second cylinders respectively

Art Unit: 3771

containing first and second mixed gases in which a plurality of diving gases are mixed with different mixture ratios for each of said first and second cylinders (Figure 3, elements 94) comprising: a switching condition storage unit (97) configured to store at least one switching condition during diving for each of said first and second cylinders, a switch destination cylinder selecting unit (5) configured to receive a user input for switching from said first cylinder to said second cylinder, while the diver is using said first cylinder; a safety determining unit (98) configured to determine whether there is a possibility of oxygen poisoning or oxygen deficiency if said second cylinder is used; and a warning unit (the combination of elements 10, 37, and 38) configured to warn the diver when the possibility of oxygen poisoning or oxygen deficiency has been determined.

As to Claims 37, 46, and 55, Furtura discloses a cylinder information presentation unit (10) configured to present to the diver information about said second cylinder when the diver has selected to switch to said second cylinder.

As to Claims 38, 47, and 56, Furtura discloses the information about said second cylinder includes a mixture ratio of the diving gases in said second cylinder and diving condition information in a situation when said second cylinder is used. In the display (10) shown in Figure 1, the mixture ratio is disclosed by element 118 and the diving condition information such as maximum depth is disclosed by element 113.

As to Claims 39, 48, and 57, Furtura discloses the diving condition information includes a permissible non-decompression dive time or decompression diving instruction, and partial pressure. In figure 1 of the display the dive time is disclosed by element 112 and the partial pressure is disclosed by element 905.

As to Claim 58, please see the rejection of claim 33, which addresses all the recited elements. Furthermore, Furtura discloses a computer readable recordable medium (the combination of 53 and 54) for storing a control program for controlling with a computer (51).

Response to Arguments

3. Applicant's arguments, see Page 22-23, filed June 7, 2007, with respect to the Double Patenting Rejection of Claims 35, 38, 44, 47, 53, and 56 have been fully considered and are persuasive. Therefore the double patenting rejection has been withdrawn.

4. Applicant's arguments filed June 7, 2007, with respect to the prior art rejection have been fully considered but they are not persuasive. Regarding Applicant's arguments with respect to the Furuta reference, it is noted that Applicant's arguments are not commensurate with the scope of the claims. Specifically regarding the assertion of the differences between Applicant's invention and the Furuta reference, Applicant is advised although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Annette F. Dixon whose telephone number is (571) 272-3392. The examiner can normally be reached on Monday thru Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on (571) 272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3771

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Annette F Dixon
Examiner
Art Unit 3771



JUSTINE R. YU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700

8/3/07